

ATTACHMENT E

California Environmental Protection Agency
AIR RESOURCES BOARD

Phase 2 Greenhouse Gas Amendments to

CALIFORNIA 2015 AND SUBSEQUENT MODEL CRITERIA POLLUTANT EXHAUST EMISSION STANDARDS AND TEST PROCEDURES AND 2017 AND SUBSEQUENT MODEL GREENHOUSE GAS EXHAUST EMISSION STANDARDS AND TEST PROCEDURES FOR PASSENGER CARS, LIGHT-DUTY TRUCKS, AND MEDIUM-DUTY VEHICLES

Adopted: March 22, 2012
Amended: December 6, 2012
Amended: September 2, 2015
Amended: [INSERT DATE OF AMENDMENT]

Note: The existing language, as last amended September 2, 2015, is shown in plain text. The proposed amendments to this document are shown in underline to indicate additions and ~~strikeout~~ to indicate deletions, compared to the test procedures as last amended September 2, 2015. “[No change]” indicates federal provisions that are incorporated herein without change. Existing intervening text that is not amended in this rulemaking is indicated by “* * *”.

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CALIFORNIA 2015 AND SUBSEQUENT MODEL CRITERIA POLLUTANT EXHAUST EMISSION STANDARDS AND TEST PROCEDURES AND 2017 AND SUBSEQUENT MODEL GREENHOUSE GAS EXHAUST EMISSION STANDARDS AND TEST PROCEDURES FOR PASSENGER CARS, LIGHT-DUTY TRUCKS, AND MEDIUM-DUTY VEHICLES

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PART I: GENERAL PROVISIONS FOR CERTIFICATION AND IN-USE VERIFICATION OF EMISSIONS

A. General Applicability

1. §86.1801 Applicability.

1.1 §86.1801-12. ~~February 19, 2015~~ October 25, 2016.

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1.1.7 Amend subparagraph (g) *Complete and incomplete vehicles* as follows:

A manufacturer must certify any heavy-duty complete Otto-cycle vehicle or complete diesel vehicle of 14,000 pounds Gross Vehicle Weight Rating (GVWR) or less and any medium-duty passenger vehicle in accordance with the medium-duty chassis-standards of section E.1 of these test procedures. For the 2015 through 2021 model years, a manufacturer must certify all LEV II heavy-duty engines or vehicles of 14,000 pounds GVWR or less, excluding medium-duty passenger vehicles, to the medium-duty engine standards in title 13, CCR, section 1956.8 (c) or (h), as applicable. For the ~~2022~~2020 and subsequent model years, a manufacturer must certify any heavy-duty vehicle of 10,000 pounds GVWR or less, including incomplete Otto-cycle vehicles and incomplete heavy-duty diesel vehicles, in accordance with the LEV III medium-duty chassis-standards of section E.1 of these test procedures. A manufacturer must certify any heavy-duty engine and vehicle of 10,001-14,000 pounds GVWR to the medium-duty engine standards in title 13, CCR, section 1956.8 (c) or (h), as applicable. A manufacturer may request to certify LEV II heavy-duty complete diesel vehicles of 14,000 pounds GVWR or less and LEV III heavy-duty complete diesel vehicles of 10,001 - 14,000 pounds GVWR to the chassis-standards in section E.1 of these test procedures; heavy-duty engine or heavy-duty vehicle provisions of 40 CFR Part 86 subpart A do not apply to such a vehicle or engine. ~~[No change.]~~

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3. §86.1802 Section Numbering; Construction.

3.1 §86.1802-01. October 25, 2016. [No change.]

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B. Definitions, Acronyms and Abbreviations

1. §86.1803 Definitions.

1.1 §86.1803-01. ~~February 19, 2015~~ October 25, 2016. [No change, except as otherwise noted below.]

2. California Definitions.

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“Heavy-duty greenhouse gas phase 2 regulations” (or “HD GHG Phase 2 regulations”) means the greenhouse gas regulations that apply to new 2021 and subsequent model year medium- and heavy-duty vehicles, excluding medium-duty passenger vehicles, and new 2020 and subsequent model year trailers, in section 1956.8, title 13, CCR, and sections 95660 through 95664, title 17, CCR.

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“**Subconfiguration**” means a unique combination within a vehicle configuration that meets the criteria in 40 CFR §600.002-08 (~~October 15, 2012~~ October 25, 2016).

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C. General Requirements for Certification

1. §86.1805 Useful Life.

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1.2 §86.1805-17. ~~February 19, 2015~~ October 25, 2016.

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3. §86.1807 Vehicle Labeling.

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3.2 California Labeling Requirements.

3.2.1. In addition to the federal requirements set forth in §86.1807, labeling shall conform with the requirements specified in section 1965, title 13, CCR and with either the “California Environmental Performance Label Specifications for 2009 and Subsequent Model Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Passenger Vehicles” or the “California Environmental Performance Label Specifications for 2021 and Subsequent Model Year Medium-Duty Vehicles, Except Medium-Duty Passenger Vehicles,” as applicable, as incorporated by reference in section 1965, title 13, CCR. In cases where there is conflict with the federal label specifications, the California requirements shall apply.

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E. California Exhaust Emission Standards.

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For the 2015 through ~~2024~~2019 model years, a manufacturer has the option of certifying ~~LEV II~~ engines used in incomplete Otto-cycle and incomplete diesel medium-duty vehicles with a gross vehicle weight rating of greater than 8,500 lbs. GVW to the heavy-duty engine standards and test procedures set forth in title 13, CCR, sections 1956.8(c) and (h). ~~All 2015 through 2021 model LEV II medium-duty vehicles with a gross vehicle weight rating of less than or equal to 8,500 lbs. GVW and all LEV III medium-duty vehicles with a gross vehicle weight rating of less than or equal to 10,000 lbs. GVW, including incomplete Otto-cycle medium-duty vehicles and medium-duty vehicles that use diesel cycle engines, must be certified to the chassis standards and test procedures set forth in this section E.~~ For the ~~2022~~2020 and subsequent model years, a manufacturer has the option of certifying LEV III engines used in incomplete Otto-cycle and incomplete diesel medium-duty vehicles with a gross vehicle weight rating of greater than 10,000 lbs. GVW to the heavy-duty engine standards and test procedures set forth in title 13, CCR, sections 1956.8(c) and (h). All 2020 and subsequent model medium-duty vehicles with a gross vehicle weight rating of less than or equal to 10,000 lbs. GVW, including incomplete Otto-cycle medium-duty vehicles and medium-duty vehicles that use diesel cycle engines, must be certified to the LEV III chassis standards and test procedures set forth in this section E.

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2. Emission Standards Phase-In Requirements for Manufacturers.

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2.6 Greenhouse Gas Requirements for Medium-Duty Vehicles Other than Medium-Duty Passenger Vehicles.

Medium-duty vehicles other than MDPVs must meet the greenhouse gas requirements in section 1956.8, title 13, CCR and sections 95660 through 95664, title 17, CCR.

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F. Requirements and Procedures for Durability Demonstration

1. §86.1820 Durability group determination.

1.1 §86.1820-01. October 25, 2016. [No change.]

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4. §86.1823 Durability demonstration procedures for exhaust emissions.

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4.2 §86.1823-08. ~~April 28, 2014~~ October 25, 2016. [No change, except that subparagraph (m) applies only to vehicles certifying to the 2012 through 2016 MY National greenhouse gas program and to the HD GHG Phase 2 regulations.]

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G. Procedures for Demonstration of Compliance with Emission Standards

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12. §86.1838 Small volume manufacturers certification procedures.

12.1 §86.1838-01. ~~April 28, 2014~~ October 25, 2016. [No change, except that the reference to 15,000 units shall mean 4,500 units in California and the reference to 14,999 units shall mean 4,499 units in California.]

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H. Certification, Information and Reporting Requirements.

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4. §86.1844 Information Requirements: Application for Certification and Submittal of Information Upon Request.

4.1 §86.1844-01. ~~February 19, 2015~~ October 25, 2016.

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I. In-Use Compliance Requirements and Procedures

1. §86.1845 Manufacturer in-use verification testing requirements.

1.1 §86.1845-04. ~~February 19, 2015~~ October 25, 2016.

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2. §86.1846 Manufacturer in-use confirmatory testing requirements.

2.1 §86.1846-01. ~~April 28, 2014~~ October 25, 2016.

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J. Procedural Requirements

1. §86.1848-10 Certification. ~~April 28, 2014~~ October 25, 2016.

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~~16~~15. §86.1865-12 How to comply with the fleet average CO₂ standards. ~~October 15, 2012~~ October 25, 2016. [No change, except that this section shall only apply to vehicles certifying under the 2012 through 2016 MY National greenhouse gas program and the HD GHG Phase 2 regulations.]

~~17~~16. §86.1866-12 CO₂ fleet average credit programs. ~~October 15, 2012~~ October 25, 2016. [No change, except that for the 2012 through 2016 model years this section shall only apply to vehicles certifying under the 2012 through 2016 MY National greenhouse gas program.]

~~18~~17. §86.1867-12 Optional early CO₂ credit programs. ~~October 15, 2012~~ October 25, 2016. [No change, except that this section shall only apply to vehicles certifying under the 2012 through 2016 MY National greenhouse gas program, or the 2017 through 2025 MY National greenhouse gas program, and the HD GHG Phase 2 regulations.]

~~19~~18. §86.1868-12 CO₂ credits for improving the efficiency of air conditioning systems. ~~April 28, 2014~~ October 25, 2016. [No change, except that this section shall only apply to vehicles certifying under the 2012 through 2016 MY National greenhouse gas program or the 2017 through 2025 MY National greenhouse gas program.]

~~20~~19. §86.1869-12 CO₂ credits for off-cycle CO₂-reducing technologies. ~~October 15, 2012~~ October 25, 2016. [No change, except that this section shall only apply to vehicles certifying under the 2012 through 2016 MY National greenhouse gas program, or the 2017 through 2025 MY National greenhouse gas program, and the HD GHG Phase 2 regulations.]

~~21~~20. §86.1870-12 CO₂ credits for qualifying full-size light pickup trucks. ~~October 15, 2012~~ October 25, 2016. [No change, except that this section shall only apply to vehicles certifying under the 2017 through 2025 MY National greenhouse gas program.]

PART II: CALIFORNIA EXHAUST AND PARTICULATE EMISSION TEST PROCEDURES FOR PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

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A. 40 CFR Part 86, Subpart B - Emission Regulations for 1977 and Later Model Year New Light-Duty Vehicles and New Light-Duty Trucks and New Otto-Cycle Complete Heavy-Duty Vehicles; Test Procedures.

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86.143-96 Calculations; evaporative emissions. ~~April 28, 2014~~ October 25, 2016.

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C. 40 CFR Part 1066 – Vehicle-Testing Procedures.

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2. Subpart B – Equipment, Measurement Instruments, Fuel, and Analytical Gas Specifications.

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1066.105 Ambient controls and vehicle cooling fans. ~~April 28, 2014~~ October 25, 2016.

1066.110 Equipment specifications for emission sampling systems. ~~April 28, 2014~~ October 25, 2016.

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1066.135 Linearity verification. ~~April 28, 2014~~ October 25, 2016.

1066.140 Diluted exhaust flow calibration. ~~April 28, 2014~~ October 25, 2016.

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3. Subpart C – Dynamometer Specifications.

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1066.210 Dynamometers. ~~April 28, 2014~~ October 25, 2016.

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1066.235 Speed verification procedure. ~~February 19, 2015~~ October 25, 2016.

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1066.245 Response time verification. ~~April 28, 2014~~October 25, 2016.

1066.250 Base inertia verification. ~~April 28, 2014~~October 25, 2016.

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1066.260 Parasitic friction compensation evaluation. ~~April 28, 2014~~October 25, 2016.

1066.265 Acceleration and deceleration verification. ~~April 28, 2014~~October 25, 2016.

1066.270 Unloaded coastdown verification. ~~February 19, 2015~~October 25, 2016.

1066.275 Daily dynamometer readiness verification. ~~April 28, 2014~~October 25, 2016.

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4. Subpart D – Coastdown.

1066.301 Overview of road-load determination procedures. ~~February 19, 2015~~October 25, 2016.

1066.305 Procedures for specifying road-load forces for motor vehicles at or below 14,000 pounds GVWR. ~~February 19, 2015~~October 25, 2016.

1066.310 Coastdown procedures for motor vehicles above 14,000 pounds GVWR. ~~April 28, 2014~~October 25, 2016.

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5. Subpart E – Preparing Vehicles and Running an Exhaust Emission Test.

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1066.410 Dynamometer test procedure. ~~February 19, 2015~~October 25, 2016.

1066.415 Vehicle operation. ~~April 28, 2014~~October 25, 2016.

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1066.425 Performing emission tests. ~~April 28, 2014~~October 25, 2016.

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7. Subpart G – Calculations.

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1066.605 Mass-based and molar-based exhaust emission calculations. ~~February 19, 2015~~October 25, 2016.

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1066.615 NOx intake-air humidity correction. ~~February 19, 2015~~October 25, 2016.

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1066.625 Flow meter calibration calculations. ~~April 28, 2014~~October 25, 2016.

1066.630 PDP, SSV, and CFV flow rate calculations. ~~April 28, 2014~~October 25, 2016.

1066.635 NMOG determination. ~~February 19, 2015~~October 25, 2016. [n/a]

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1066.695 Data requirements. ~~April 28, 2014~~October 25, 2016.

8. Subpart H – Cold-Temperature Test Procedures.

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1066.710 Cold temperature testing procedures for measuring CO and NMHC emissions and determining fuel economy. ~~February 19, 2015~~October 25, 2016.

9. Subpart I – Exhaust Emission Test Procedures for Motor Vehicles.

1066.801 Applicability and general provisions. ~~February 19, 2015~~October 25, 2016.

1066.805 Road load power, test weight, and inertia weight class determination. ~~April 28, 2014~~October 25, 2016.

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1066.815 Exhaust emission test procedures for FTP testing. ~~February 19, 2015~~October 25, 2016.

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1066.820 Composite calculations for FTP exhaust emissions. ~~April 28, 2014~~October 25, 2016.

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1066.835 Exhaust emission test procedures for SC03 emissions. ~~February 19, 2015~~October 25, 2016.

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10. Subpart K – Definitions and Other Reference Material.

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1066.1005 Symbols, abbreviations, acronyms, and units of measure. ~~February 19, 2015~~October 25, 2016.

1066.1010 Incorporation by reference. ~~February 19, 2015~~October 25, 2016.

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